

Question #2: What is the impact of HIV/AIDS on the population?

In the United States, HIV/AIDS remains a significant cause of illness, disability, and death, despite declines in new AIDS cases and deaths from 1995 to 2003. Current surveillance provides population-based HIV/AIDS data for tracking trends in the epidemic, targeting and allocating resources for prevention and treatment services, and planning and conducting program evaluation activities.

In South Carolina, AIDS cases have been reported since 1981, and confirmed cases of HIV infection have been reportable since February 1986. During the calendar year of 2002, according to the CDC HIV/AIDS Surveillance Report, South Carolina ranked 7th among states and the District of Columbia with an AIDS case rate of 20.3 per 100,000 population. During 2001, South Carolina ranked eighth among states and the District of Columbia with an AIDS case rate of 13.1 per 100,000 for female adolescent/adult AIDS cases. The epidemic is continuing to grow with an average of 72 cases of HIV infection reported each month during the past year. As of December 31, 2003, there were 19,462 persons cumulatively reported with HIV, and of them, 13,213 have been diagnosed with AIDS.

South Carolina has experienced a 71% increase of all persons living with HIV/AIDS from 1995 to 2003. More dramatic, there has been a 97% increase in the number of women living at the end of 2003 compared with the number living in 1995.

This section summarizes the overall toll of the epidemic in South Carolina based on total reported HIV/AIDS cases and deaths.

Gender

Figure 7 shows the impact of HIV on the men and women in South Carolina. Men unequivocally are disproportionately affected by HIV/AIDS. They make up 49% of South Carolina's total population, but comprise 69% of persons living with HIV (prevalence). HIV-only diagnosed cases during the two-year period 2001-2002 gives an estimate of more recent infections or potentially emerging populations. These data show an increasing proportion among females (35%) compared to the prevalence data (31%).

Figure 7: Disproportionate HIV Impact by Gender, South Carolina

SEX	No.(%) SC Total Population	No. (%) of Total Estimated Living With HIV/AIDS, 2003	No. (%) of Total HIV-Only Diagnosis, 2001-2002
Male	1,948,929 (49%)	9,169 (69%)	698 (65%)
Female	2,063,083 (51%)	4,026 (31%)	377 (35%)
Total	4,012,012	13,195 (100%)	1,075 (100%)

Source: 2000 US Census Data; SCDHEC HARS

Note: The estimated number of persons living with HIV/AIDS as of 2001 includes 1,310 persons reported to other states upon initial diagnosis but who have subsequently moved to South Carolina and received care. Persons who had only an HIV infection diagnoses (not yet AIDS) during 2001 – 2002 includes only persons initially diagnosed and residing in South Carolina and excludes any out-of-state cases who may have moved to the state.

Figure 8 shows the rate per 100,000 population for males and females diagnosed with HIV/AIDS each year. During 1996 – 2003 the case rate for females appears to be slightly decreasing. For males, the rate had declined prior to 1998, when the rate increased due to screening in the state correctional facilities. With the exception of 1998, the ratio of men to women has averaged about 2 to 1 during the past three years, where previously it was more than 3 to 1.

Race/Ethnicity

African Americans are disproportionately impacted by HIV/AIDS in South Carolina. They comprise 30% of the state's total population, yet 73% of the total persons living with HIV are African American. Two percent (2%) of total cases are Hispanic, who comprise the same proportion of the state's population (Figure 9).

Figure 8 : HIV/AIDS Case Rate per 100,000 for Males and Females, 1988 - 2003

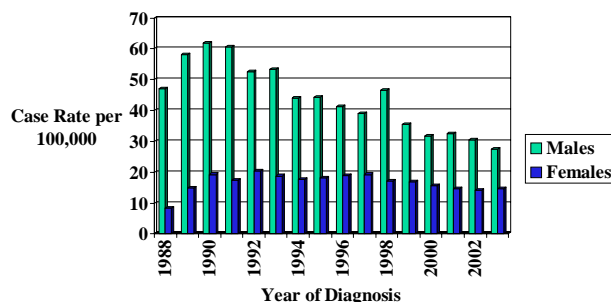


Figure 9: Proportion of Persons Living with HIV/AIDS by Race/Ethnicity, 2003

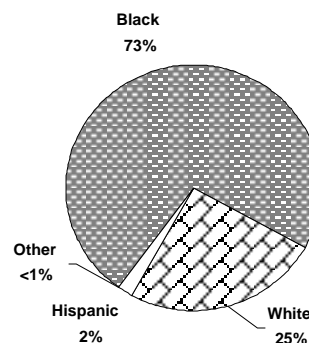
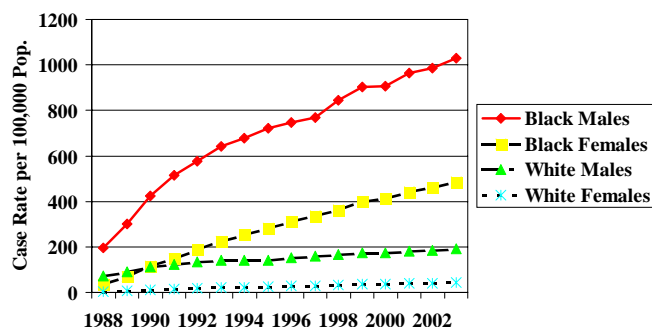


Figure 10: Disproportionate HIV Impact by Race/Ethnicity/Gender, SC

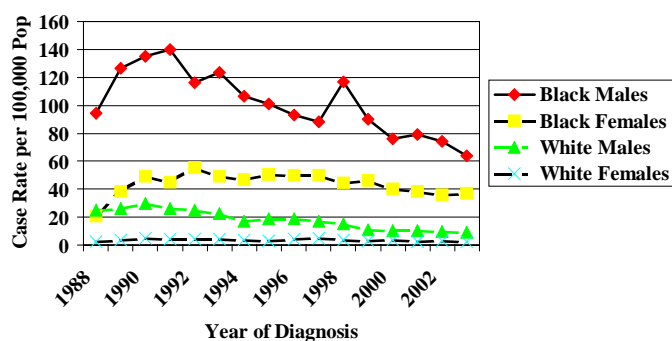
Gender & Race/Ethnicity	No. (%) SC Total Pop.	No. (%) of Total Persons Living With HIV/AIDS, 2003	No. (%) of Total HIV Only Diagnosis, 2001-2002
Black Males	593,707 (15%)	6292 (48%)	512 (48%)
Black Females	668,799 (17%)	3364 (26%)	308 (29%)
White Males	1,355,222 (34%)	2680 (20%)	166 (15%)
White Females	1,394,284 (35%)	596 (5%)	65 (6%)
Hispanic Males	23,978 (0.6%)	169 (1%)	18 (1.7%)
Hisp. Females	22,296 (0.6%)	51 (0.4%)	4 (0.4%)

African American men comprise 15% of the state's population, yet 48% of the total prevalent HIV/AIDS cases in 2003. African American women, similarly, comprise 17% of the population, yet 25% of prevalent cases. More recent infections (HIV-Only Diagnosis) during 2001 - 2002 reflect a slight decrease among white men and increase among African American women relative to the proportion of persons living with HIV in 2003. (Figure 10)

Figure 11: HIV/AIDS Prevalence Rates by Race/Gender, SC

Each year the number of all persons living with HIV/AIDS continues to grow. Case rates per 100,000 by race and gender show the disparate burden of HIV among African Americans. As Figure 11 shows, the rate per 100,000 population in 2003 is five times higher for black males than for white males, and twelve times higher for black females compared to white females. An increase in the case rate for black men in 1998 reflected a large number of new cases reported as a result of a Department of Corrections screening.

While the overall number and rate of newly diagnosed persons with HIV/AIDS each year is stable, there are differences among race/gender populations. (Figure 12) The case rate per 100,000 population among white men in South Carolina has decreased 15% during the past five years (1999-2003). The increasing rate among African American women in both S.C. and the U.S. during 1988 - 1992 indicate the increasing risk of heterosexual transmission. The rate for African American women in S.C. decreased 20% from 1999 to 2003.

Figure 12: HIV/AIDS Case Rates by Race/Gender and Year of Diagnosis, SC

As stated previously, the case rate among African American males increased in 1998-1999 due to correctional facility screening; however, overall the rate decreased 29% during the past five years.

Age

When looking at age groups, persons between the ages of 20 and 44 are disproportionately impacted. They make up 37% of the total population yet they represent about 80% of prevalent and 74% of HIV-only diagnosed cases. (Figure 13)

Figure 13: Disproportionate HIV Impact by Age, SC

Age	No. (%) SC Population	No. (%) of Total Persons Living with HIV/AIDS, 2003	No. (%) of Total HIV-Only Diagnosis, 2001-2002
< 13 Years	724,209 (18%)	152 (1%)	5 (.5%)
13 – 19 Years	411,579 (10%)	557 (4%)	51 (5%)
20 – 44 Years	1,467,669 (37%)	10,603 (80%)	795 (74%)
45+ Years	1,408,565 (35%)	1,909 (14%)	224 (21%)

Figure 14: S.C. HIV/AIDS Case Rate per 100,000 by Age by Year of Diagnosis, 1988-2003

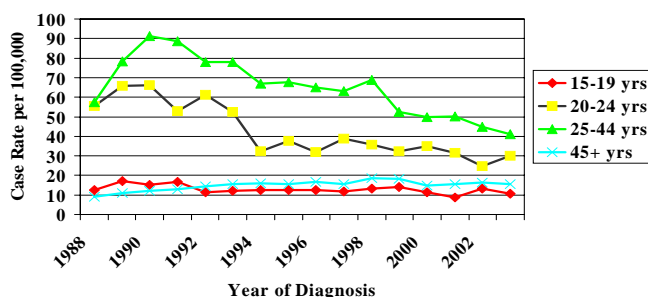
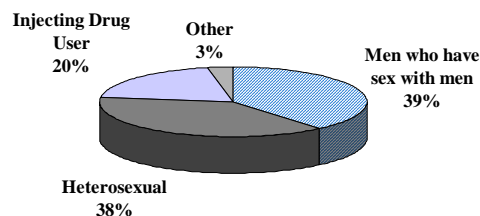


Figure 14 shows the HIV/AIDS case rates per 100,000 population by year of diagnosis for selected adult/adolescent age groups for the past sixteen years. The rates are highest for persons 25 - 44 years of age, followed by those 20 - 24 years.

Risk Exposure

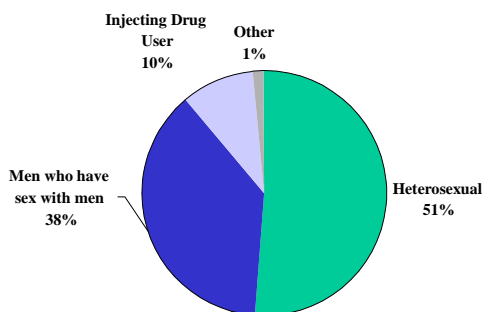
Men who have sex with men (MSM) comprise the greatest proportion of persons living with HIV/AIDS at the end of 2003 with known risk factors (39%), followed closely by heterosexuals (38%). Twenty percent (20%) are injecting drug users. (Figure 15). Other risks include blood transfusions, hemophilia, perinatal transmission. Of the total estimated number of persons living with HIV/AIDS in 2003, 25% had no risk identified (not reflected in Figure 15).

**Figure 15: Proportion of Persons Living with HIV/AIDS by Risk Exposure, 2003
N=9,906**



Note: Total Excludes Cases with No Risk Identified

**Figure 16: Proportion of HIV/AIDS Cases by Risk Exposure, 2002 -2003
N= 1,135**



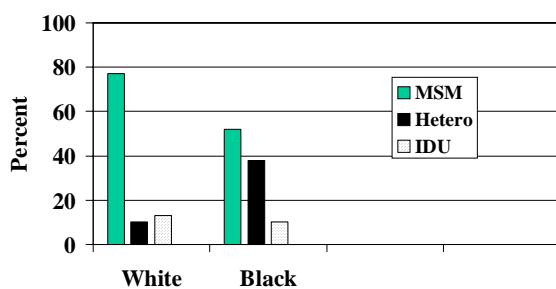
Note: Total Excludes Cases with No Risk Identified

Figure 16 shows a slight shift in risk exposure categories among persons diagnosed with HIV/AIDS during 2002 - 2003 with known risk exposures compared to the prevalent cases in Figure 15. The proportion of cases due to heterosexual transmission was 51%, men who have sex with men accounted for 38%. Thirty-six percent (36%) of these cases had no risk identified (not reflected).

Figure 17: Comparison of No Risk Identified Cases with Total S.C. HIV/AIDS Reported Cases, 2003

Race/Gender (Adult/Adolescent Cases)	% Total Cases with No Risk Identified, 2003 N=315	% Total HIV/AIDS Cases Reported, 2003 N=853
Black Male	47%	46%
Black Female	31%	30%
White Male	11%	15%
White Female	4%	4%
Other	7%	5%

originally reported with no risks is similar to the total proportion of HIV/AIDS cases by race/gender (Figure 17).

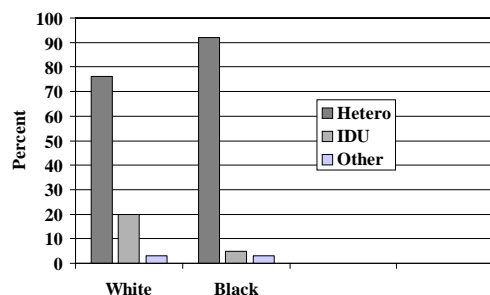
Figure 18: Proportion of White and Black Male HIV/AIDS Cases By Exposure Category, Diagnosed 2002-2003

Total Males, All Ages; Excludes Persons with No Risk Reported;
N=734

Among women diagnosed during 2002 – 2003, 83% of cases were among African American women. Heterosexual contact was the most common reported risk for all women (93%). Injecting drug use is more commonly reported among white women (20%) than among black women (5%). (Figure 19)

Note: The primary reasons for risk exposure information not reported were explained in the Introduction, South Carolina HIV/AIDS Surveillance System section. Over time, the proportion of cases with no risk identified in a given year decreases when risks are determined through follow-up surveillance activities. For example, during 2000 there were 312 cases originally reported with no risk; as of December 2001, risks were determined for 249 of the 312 cases. The race/gender profile of 2003 cases

During 2002 – 2003, 73% of males diagnosed with HIV/AIDS were African American. Among African American males with reported risk factors, most cases were attributed to male to male sexual contact (52%) and heterosexual contact (38%). Injecting drug use was reported more frequently among white men (13%) than African American men (10%). Among white men, over three-fourths (77%) were men who have sex with men. Only 10% reported heterosexual risk. (Figure 18)

Figure 19: Proportion of White and Black Female HIV/AIDS Cases By Exposure Category, Diagnosed 2002-2003

Total Females, All Ages; Excludes Persons with No Risk Reported;
N=376

Figures 20 and 21 show the proportion of total HIV/AIDS cases diagnosed during four periods from 1992 – 2003 by sex and risk exposure category for males and females in South Carolina. Both men and women experienced decreases over time in the proportion of total cases with risk reported among injecting drug users. There was a 74% decrease in the proportion among injecting drug use for men and 71% decrease among women during 1992 – 1994 to 2001 – 2003. The proportion of heterosexual risk remained about the same for men and increased 16% for women during the same time periods.

Figure 20: Proportional Distribution of Male HIV/AIDS Cases, by Exposure Category, Diagnosed 1992-2003

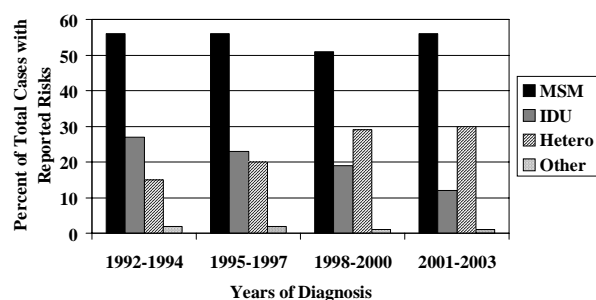
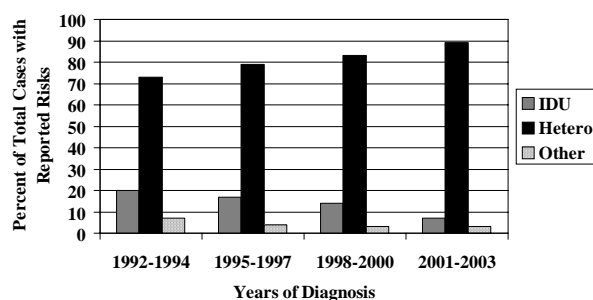


Figure 21: Proportional Distribution of Female HIV/AIDS Cases, by Exposure Category, Diagnosed 1992-2003



Residence

Persons living with HIV/AIDS are widespread throughout the state. Over 48% of counties have prevalence rates >600 per 100,000 for African Americans, as reflected in Figure 22. Annual case rates in counties of more recently diagnosed African American persons during 2001 – 2003 reflect essentially the same counties as highest prevalence rates. Richland county has the highest annual case rate (Figure 23).

Figure 22: SC HIV Prevalence Rates (per 100,000 population) Cases Currently Living, 2003 African-American

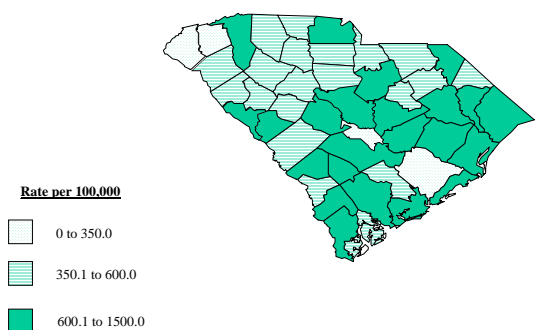
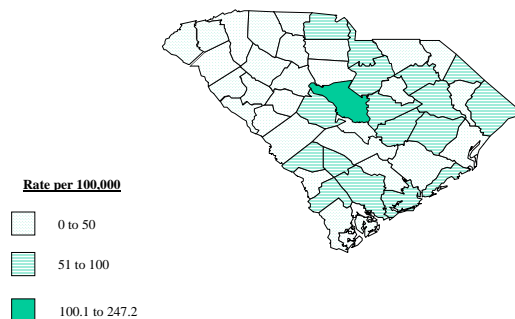


Figure 23: SC HIV/AIDS Incidence Rates (per 100,000 population) 2001-2003 Average of Cases African-American



Counties with highest prevalence rates among white persons include more urban areas of Greenville, Spartanburg, Richland and Lexington (Columbia), Charleston, Horry (Myrtle Beach), as well as Orangeburg, Sumter, Florence, Marlboro, Dillon, Jasper, Allendale, McCormick, Colleton, and Lee (Figure 24). Figure 25 shows counties with highest rates of more recently diagnosed white persons are Richland, Charleston, Horry, Bamberg, and Barnwell.

Figure 24: SC HIV Prevalence Rates (per 100,000 population) Cases Currently Living, 2003 Whites

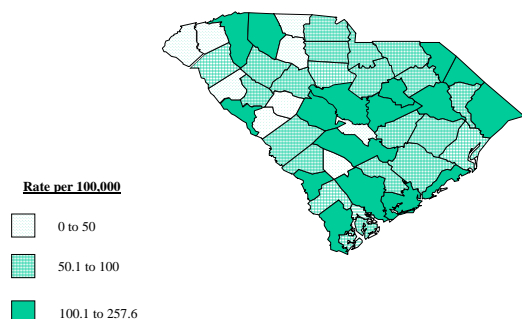
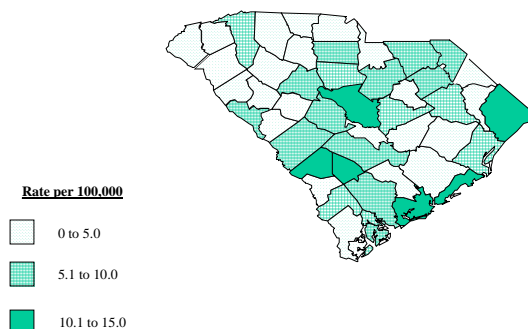


Figure 25: SC HIV/AIDS Incidence Rates (per 100,000 population) 2001-2003 Average of Cases Whites



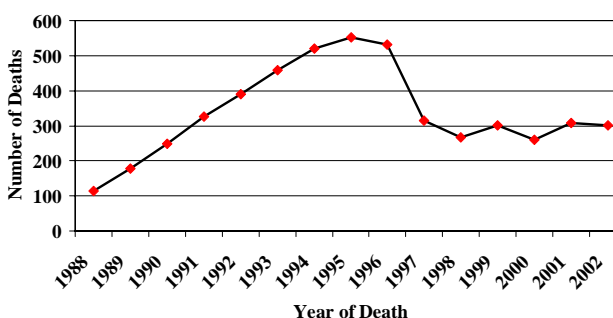
Mortality

With the advent of combination therapies and the use of prophylaxis, persons infected with HIV are living longer, delaying the progression of AIDS, which is the advanced stage of the disease. These medications have also led to the decrease in HIV-related deaths.

Large declines in HIV mortality nationally essentially occurred during 1996 – 1997. Officials at the Centers for Disease Control and Prevention (CDC) cautiously attributed the sudden drops in deaths to new anti-retrovirals, protease inhibitors, combination therapies, and increased prophylaxis for opportunistic illnesses. However, the initially reported gains were tempered by reports of demographic differentials that suggested only certain groups were benefiting from these new therapies

Figure 26 shows largest declines in deaths in South Carolina were in 1997, dropping to 317 from 532 the previous year. In recent years, death among persons with AIDS has remained fairly stable, which may indicate diminishing efficacy of therapies among some patients. Reasons for this may include delay in diagnosis of HIV infection until severe symptoms arise, difficulty in adherence to prescribed medical treatments, and development of viral resistance to therapy.

Figure 26: Deaths Among Persons with AIDS in South Carolina, 1988-2002



Source – SCDHEC, Vital Records, SC Residence Data

Figure 27: Characteristics of Persons who died of AIDS, 2002

	No.	%
Race/Sex		
Black Male	169	56
Black Female	63	21
White Male	52	17
White Female	17	6
Age Group		
<15	0	0
15-24	4	1
25-44	175	58
45+	123	41

Although black males represent 48% of persons living with HIV/AIDS, in 2002, they accounted for the majority of persons dying from AIDS (56%). African American females accounted for 21% of AIDS related deaths followed by white males (17%). By age group, the majority of deaths occurred among persons 25-44 years (58%). (Figure 27)

Figure 28: Number of Persons who died of AIDS by Health District, 2002

Health District	No.	%
Appalachia I	10	3
Appalachia II	27	9
Appalachia III	14	5
Catawba	20	7
Edisto	26	9
Low Country	12	4
Lower Savannah	8	3
Palmetto	51	17
Pee Dee	38	13
Trident	33	11
Upper Savannah	16	5
Waccamaw	26	9
Wateree	21	7

The Palmetto, Pee Dee, and Trident health districts represent the highest number of deaths from AIDS in South Carolina in 2002. These health districts are also among those that have the highest prevalence of AIDS in the state. (Figure 28)